

Docket No. AUS9-2000-0720-US1

CLAIMS:

What is claimed is:

1. A method for asynchronous execution within a program, comprising:
 - executing code in a first thread;
 - determining whether a first keyword exists in the code, the first keyword indicating a code element that may be executed out of order; and
 - executing the code element in a second thread.
2. The method of claim 1, wherein the code element is one of an instruction, a block, and a method.
3. The method of claim 1, wherein the first keyword exists in a definition of a method.
4. The method of claim 1, wherein the first thread is executed on a first processor and the second thread is executed on a second processor.
5. The method of claim 1, further comprising:
 - determining whether a second keyword exists in the code, the second keyword indicating that execution of the code element in the second thread must complete before the next code element is executed; and
 - executing the next code element in the first thread after execution of the code element in the second thread completes.
6. The method of claim 1, further comprising:

Docket No. AUS9-2000-0720-US1

determining whether a third keyword exists in the code element, the third keyword indicating a statement that may be executed out of order; and
executing the statement in a third thread.

7.The method of claim 1, wherein the method is executed by an interpreter.

8.The method of claim 7, wherein the interpreter is a Java virtual machine.

9.The method of claim 1, wherein the second thread is a light weight thread.

10.An apparatus for asynchronous execution within a program, comprising:

first execution means for executing code in a first thread;

determination means for determining whether a first keyword exists in the code, the first keyword indicating a code element that may be executed out of order; and

second execution means for executing the code element in a second thread.

11.The apparatus of claim 10, wherein the code element is one of an instruction, a block, and a method.

12.The apparatus of claim 10, wherein the first keyword exists in a definition of a method.

13.The apparatus of claim 10, wherein the first thread is

Docket No. AUS9-2000-0720-US1

executed on a first processor and the second thread is executed on a second processor.

14.The apparatus of claim 10, further comprising:

means for determining whether a second keyword exists in the code, the second keyword indicating that execution of the code element in the second thread must complete before the next code element is executed; and

means for executing the next code element in the first thread after execution of the code element in the second thread completes.

15.The apparatus of claim 10, further comprising:

means for determining whether a third keyword exists in the code element, the third keyword indicating a statement that may be executed out of order; and

means for executing the statement in a third thread.

16.The apparatus of claim 10, wherein the second thread is a light weight thread.

17.An apparatus for asynchronous execution within a program, comprising:

an interpreter; and

a program, the program including a first keyword indicating a code element that may be executed out of order,

wherein the interpreter, upon detecting the keyword, creates a light weight thread and executes the code element in the light weight thread.

18. The apparatus of claim 17, wherein the interpreter is a Java virtual machine.

instructions for executing code in a first thread;
instructions for determining whether a first keyword
exists in the code, the first keyword indicating a code
element that may be executed out of order; and
instructions for executing the code element in a
second thread.

21.The computer program product of claim 19, further comprising:

instructions for executing the next code element in the first thread after execution of the code element in the second thread completes.

instructions for determining whether a third keyword

exists in the code element, the third keyword indicating a statement that may be executed out of order; and instructions for executing the statement in a third thread.